THE COMPETITIVE ADVANTAGE OF MULTI-PLATFORM-BASED ECOSYSTEM: THE EVIDENCE FROM ALIBABA

Jin Shi (Corresponding author)

Graduate School of Humanities and Social Science, Saitama University, Saitama, Japan

Shijin@mail.saitama-u.ac.jp

Huifeng Bai

Liverpool Business School, Liverpool John Moores University, Liverpool, UK

H.Bai@ljmu.ac.uk

Introduction

In the past two decades, the landscape of global market had experienced tremendous momentum due to emerging multinational corporations which adopted platforms and ecosystems as business models, for instance GAFA (Google, Apple, Facebook, Amazon) in the United States and BAT (Baidu, Alibaba, Tencent) in China. Given this profound phenomenon, many scholars predicted the focus of future competition among firms will shift toward platform or ecosystem (Moore *et al*., 1997; Tiwana *et al*., 2010; Eisenmann *et al*., 2011; Sussan & Acs, 2017). Meanwhile, platforms or ecosystems have also emerged as a prevailing research theme. For instance, in international business, the issue has been analyzed from various perspectives, including innovation, governance, and entrepreneurship, and has accumulated a large body of research (Moore,1993; Gawer & Cusumnamo, 2002; Evans, 2003; Tiwana & Bush, 2010; William & De Meyer, 2012; Adner & Kapoor, 2013; Hagiu, 2013; Sussan & Acs, 2017; Jacobides *et al*., 2018). Despite great contribution of prior literature, the understanding of platforms or ecosystems still remain under-developed. For example, the ecosystem deploying multiple platforms simultaneously, namely Multi-platform-based (MPB) ecosystem has been overlooked so far. Moreover, there is also a lack of research that examines the ecosystem's competitive advantage from a strategic point of view. In particular, the question of how the platform or ecosystem is built and how companies gain competitive advantage through it remains unclear. Furthermore, as identified by many researchers, there is still lack of empirical research.

Purpose

By the given gap in the current literature, this study aims to offer depth insights of competitive advantages of multiplatform-based ecosystem through case study of Alibaba, which is regarded as one of the most successful and powerful multinational corporations globally. There are several significant ecosystems simultaneously within Alibaba Group, including Fintech, logistics, entertainment, and cloud computing. This study, concentrated on its Fintech ecosystem, will dedicate to contribution insights for the following research questions:

- What is the development process of Alibaba’s multi-platform-based ecosystem?
- Who are the participants of the MPB ecosystem?
- What is the mechanism through which the firm has gained competitive advantage?

Conceptual framework

The extant related research has been organized as follow.

Platform and Ecosystem Moore (1993) firstly applied the biological term ecosystem into business research. Since then, the concept has been widely accepted in academia. Although the exact definition varies from one scholar to another, they all agree that the ecosystem members are interacting with each other and they are interdependent for a successful business. Jacobides *et al*. (2018) categorized existing ecosystem research into three streams: a "*business ecosystem*" approach, an "*innovation ecosystem*" approach, and a "*platform ecosystem*" approach which this study will adopt. The term of platform in this study is an interface embedded in product, service or technology that mediates transactions between different groups of users (Evans, 2003; Hagiu, 2013; Rochet & Tirole, 2003). Alternatively, it is also a building block that serves as a foundation on which other companies can build related products or services (Gawer & Cusumano, 2002). Moreover, the ecosystem refers to the platform and its network of complementors that produce complements to enhance platform value (Gawer & Cusumano, 2008; Adner & Kappoor, 2010; Ceccagnoli *et al*., 2012).

Ecosystem Participants, Roles and Interactions The participants of the ecosystem can be broadly classified into three categories: focal firm, customer, and complementor (Williamson & De Meyer, 2012; Jacobides *et al*., 2018). Among these, the focal firm acts as the ecosystem designer that decides on the rules which include not only technological elements such as architecture, standards and interfaces but also managerial issues including value proposition, incentive and governance (Williamson & De Meyer, 2012; Alexy *et al*., 2013; Cenamo & Santalo, 2013; Teece & Lindne, 2017; Jacobides, *et al*., 2018).

Multisidedness is identified as the most important feature of platforms and ecosystems (Rochet & Tirole, 2003; Hagui & Wright, 2015; Armstrong, 2006; Parker & Van Alstyne, 2005). Therefore, in such a multi-sided market that the ecosystem has developed, the customer could be multi-agency, for example both sellers and buyers, rather than final customer only (Hagiu & Wright, 2015).

Complementor is also referred to as partner company (Willianmson & De Meyer, 2012), that is, a company or an individual that provides complementary product or service (Willianmson & De Meyer, 2012). Meanwhile, complementors are also important source to foster innovation for the ecosystem (Jacobides *et al*., 2018). Furthermore, according to Willianmson & De Meyer (2012), complementors can also be considered as "market makers" who create business demand and bring its existing customers to ecosystem.

Thus, ecosystem represents a wholly new organizational form compared to the existing organizations and creates new inter-organizational relationships among participants (Gawer & Cusumano, 2002; Hagiu & Wright, 2015; Jacobides *et al*, 2018; Riasanow *et al*., 2019).

Ecosystem Competitive Advantage Existing research had addressed the following aspects related to ecosystem's competitive advantage: user envelopment and winner-take-all effect, value co-creation and acquisition, cost reduction, high flexibility and co-learning capability, high open innovation capability and empowerment.

Methodology

As discussed, the understanding in relation to competitive advantages of multiplatform-based ecosystem is still insufficient. An interpretivist qualitative single case study is therefore regarded to be the most appropriate methodology for this study, aiming to understand '*how*' and '*why*' research questions, especially for an emerging market phenomenon (Yin, 2018).

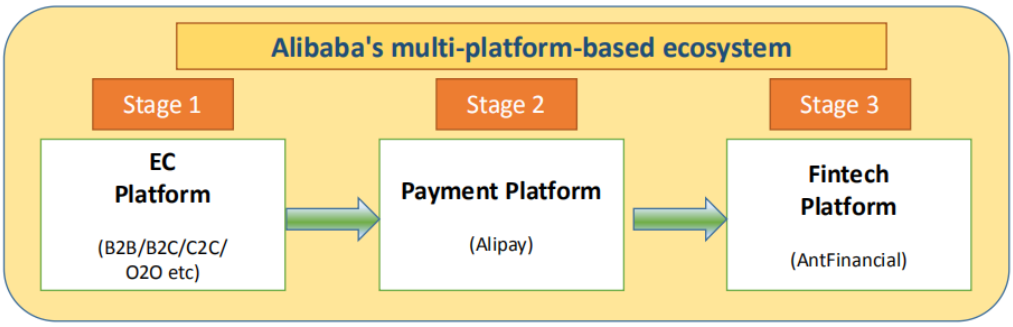
The Alibaba group was selected as the case company due to two reasons. First is that it is widely regarded as one of the few e-commerce giants globally up to date. The second is that it is one of the pioneers which have adopted multiplatform-based ecosystem business model.

The primary data were collected through extended semi-structured executive interviews with key senior management responsible for the firm's EC and Fintech operations. The secondary data were obtained from company annual reports, official websites and other marketing reports published by reputable organizations. The multiple source of information allowed triangulation to strengthen the validity and reliability of the analysis as well as to minimize the possibility of bias. Eventually, the qualitative data was analyzed using thematic analysis, which developed common themes.

Research Findings

Through examining the development process of Alibaba's multiple-platform-based ecosystem, it is revealed that Alibaba's ecosystem has gradually evolved from a single EC platform to a bundle of heterogeneous platforms that also provide various Fintech services (Figure 1).

Figure 1: Alibaba's multi-platform-based ecosystem



Within the ecosystem, EC platform (stage 1) acts as the core platform to attract and lock-in customers, while payment platform (stage 2) serves as a supportive platform to provide payment and escrow services, and the derivative Fintech platform (stage 3) provides more wide-ranged and high valued financial services. The latter two platforms act as the main profit center for the whole ecosystem. In doing so, a significant synergy effect has been created among these three platforms.

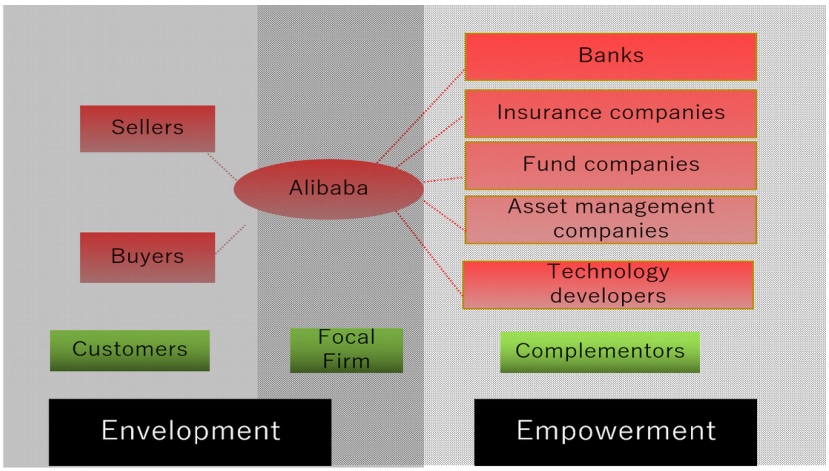
The study also identified that the participants and their roles and functions of the Alibaba's ecosystem. In its MPS ecosystem, Alibaba acts as the platform sponsor and the focal firm, who is providing services and creating values for its ecosystem's customers, including both sellers and buyers of EC business. Many firms such as financial companies especially banks, and technology providers join the ecosystem as complementors. Table 1 below demonstrated the benefits enjoyed by the participants within the ecosystem.

Table 1: The advantages that the participants have obtained from ecosystem

Focal firm (Alibaba)	Customers (sellers and buyers)	Complementors (various financial companies and technology developers)
-Less investment and cost reduction -Value co-creation -Open innovations opportunities -Quick expansion into heterogenenous business -Enhanced learning capability -Differentiation -Winner-take-all effect -High agility and flexibility	-Middle and long-tail customers included and well served -Search cost reduction -Transaction cost reduction -Value co-creation -Excellent shopping experience (low-cost, convenience) -Availability of wide-ranged financial services -Customized marketing	-Direct access to customers -Cost reduction -More open innovation opportunities -More business chances

Moreover, this paper examined how Alibaba had created the competitive advantage through its MPB ecosystem. Two mechanisms, *the customer envelopment* and *the complementor empowerment*, are identified and defined. The customer envelopment enables Alibaba to quickly expand into different businesses by taking advantages of the overlapping user bases and to enjoy the winner-take-all effect in the marketplace. Meanwhile, by getting more compelemtors on board and empowering them, Alibaba has enhanced its innovation capability which is considered to eventually optimize its value creation process and strengthen the customer envelopment (Figure 2).

Figure 2: The mechanisms of MPS ecosystem to build competitive advantage



Value

By shedding light on the MPS ecosystem, a research object ignored by the extant research, this study has revealed how it has been developed and through which mechanism to build competitive advantage. In doing so, this study has extended depth insights on the ecosystem and contributed to the theory-development.

Practical implications

This study has valuable managerial implications for both standalone and ecosystem firms. For standalone firms, this study has suggested, to win the battle with ecosystem, they need to

develop innovative product or service to destroy the customer envelopment. For firms deploying ecosystem strategy, the study implies the importance to design a sophisticated business model to make profit and to strengthen the customer envelopment and the complementor empowerment effects.

Research limitations and outlook

Although this paper has shed light on the MPS ecosystem, our understanding is still not sufficient. More cases should be examined and more evidence is needed to be collected to help us gain more profound understanding of the ecosystem.

Because of the single case study approach, the purposive sampling and small sample are potentially challenged. However, as MPS ecosystem is still in the early stage, and there are not many companies had successfully developed their MPS system. As one of the most successful and powerful companies globally, the evidence from Alibaba is strong and varied enough to represent the market. As Alibaba is an emerging market multinational corporate (EM MNC), the differences from traditional multinational corporates is also considered. Therefore, the subsequent studies could test this study's findings in quantitative methods through larger samples, especially traditional MNC originated from developed economies.

References*

Adner, R. (2017). Ecosystem as structure: An actionable construct for strategy. *Journal of Management*, 43(1), 39-58.

Adner, R., & Kapoor, R. (2010). Value creation in innovation ecosystems: How the structure of technological interdependence affects firm performance in new technology generations. *Strategic Management Journal*, 31(3), 306-333.

Alexy, O., & George, G. (2013). Category divergence, straddling, and currency: Open innovation and the legitimation of illegitimate categories. *Journal of Management Studies*, 50(2), 173-203.

Autio, E., & Thomas, L. (2014). Innovation ecosystems. The Oxford handbook of innovation management, 204-288.

Ceccagnoli, M., Forman, C., Huang, P., & Wu, D. J. (2012). Cocreation of value in a platform ecosystem! The case of enterprise software. *MIS Quarterly*, 263-290.

Cennamo, C., & Santalo, J. (2013). Platform competition: Strategic trade-offs in platform markets. *Strategic Management Journal*, 34(11), 1331-1350.

de Reuver, M., Sørensen, C., & Basole, R. C. (2018). The digital platform: a research agenda. *Journal of Information Technology*, 33(2), 124-135.

Eisenmann, T., Parker, G., & Van Alstyne, M. (2011). Platform envelopment. *Strategic Management Journal*, 32(12), 1270-1285.

Evans, D. S. (2003). Some empirical aspects of multi-sided platform industries. *Review of Network Economics*, 2(3), 191-209.

Gawer, A., & Cusumano, M. A. (2002). Platform leadership: How Intel, Microsoft, and Cisco drive industry innovation (Vol. 5, pp. 29-30). Boston, MA: Harvard Business School Press.

Gawer, A., & Cusumano, M. A. (2008). Platform leaders. MIT Sloan Management Review; MIT Sloan School of Management: Boston, MA, USA, 68-75.

Hagiu, A. (2013). Strategic decisions for multisided platforms. http://marketing.mitsmr.com/PDF/STR0715-Top-10-Strategy.pdf#page=6

Hagiu, A., & Rothman, S. (2016). Network effects aren't enough. *Harvard Business Review*, 94(4), 64-71.

Hagiu, A., & Wright, J. (2015). Multi-sided platforms. *International Journal of Industrial Organization*, 43, 162-174.

Jacobides, M. G., Cennamo, C., & Gawer, A. (2018). Towards a theory of ecosystems. *Strategic Management Journal*, 39(8), 2255-2276.

Moore, J. C., Rao, H. R., Whinston, A., Nam, K., & Raghu, T. S. (1997). Information acquisition policies for resource allocation among multiple agents. *Information Systems Research*, 8(2), 151-170.

Moore, J. F. (1993). Predators and prey: a new ecology of competition. *Harvard Business Review*, 71(3), 75-86.

Riasanow, T., Floetgen, R. J., Greineder, M., Moeslein, D., Böhm, M., & Krcmar, H. (2019). Co-evolution in Business Ecosystems: Findings from Literature. In 40th GI EMISA. https://www.researchgate.net/profile/Tobias_Riasanow/publication/333186124_Co-evolution_in_Business_Ecosystems_Findings_from_Literature/links/5cdfbbd7a6fdccc9ddb95384/Co-evolution-in-Business-Ecosystems-Findings-from-Literature.pdf

Rochet, J. C., & Tirole, J. (2003). Platform competition in two-sided markets. *Journal of the European Economic Association*, 1(4), 990-1029.

Sussan, F., & Acs, Z. J. (2017). The digital entrepreneurial ecosystem. *Small Business Economics*, 49(1), 55-73.

Teece, D. J., & Linden, G. (2017). Business models, value capture, and the digital enterprise. *Journal of Organization Design*, 6(1), 1-14.

Tiwana, A., Konsynski, B., & Bush, A. A. (2010). Research commentary—Platform evolution: Coevolution of platform architecture, governance, and environmental dynamics. *Information Systems Research*, 21(4), 675-687.

Williamson, P. J., & De Meyer, A. (2012). Ecosystem advantage: How to successfully harness the power of partners. *California Management Review*, 55(1), 24-46.

Yin, R. (2018). *Case Study Research and Applications: Design and Methods* (6th Ed). Los Angeles: SAGE.

Keywords*

Multi-platform-based Ecosystem, Platform, Ecosystem Competitive Advantage, Complementor Empowerment, Customer Envelopment, Innovation